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ABSTRACT

These 2 articles argue that the presentation of drug information in drug education has no relevance. Hoffman reviews the various approaches to drug education, most of which are based upon the idea that giving people information will act as a deterrent to their use of drugs. A scale was administered to a large and varied population of students to assess affective (attitudinal), cognitive (knowledge) and behavioral factors regarding drugs. Results indicated that the more knowledge people possessed about drugs, the more liberal (pro-drug use) their attitudes were; drug users were more knowledgeable than non-users; and a low affective score (liberal attitude) also proved significantly related to drug usage. Swisher's review of drug education programs indicates a large variation in program outcomes. Short-term programs have little impact on attitudes regarding drug abuse. Use of group counseling with information giving also makes no difference. In certain instances, giving of information was related to increased drug abuse, increased interest in acquiring additional knowledge about drugs, and liberalization of attitudes, but in general there is little evidence of beneficial effects. (KS)

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Real Research in Drug Education

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Paper Presented at the American Personnel and Guidance Association Annual Convention 1971

Many people involved in drug education are beginning to ask questions about the impact of their programs on the young people they serve. This paper summarizes five evaluations of the programs that we have been conducting. Of the five studies, two were short-term studies, and the other three were relatively long-term ranging from four sessions up to ten sessions. Two of them were large group programs, and two were small group counseling oriented programs and one was a community team workshop.

The community team workshop evaluation (Shapiro, 1971) was part of the National Drug Education Program and was held in a college community. The workshop teams included a student, a teacher and a community youth worker. The program was very intense and comprehensive with the goal of training teams that would return to their communities and set up drug education programs. In this program, on a pre-post test basis which provided some control, the student's, teacher's and community youth worker's levels of knowledge significantly increased. It is interesting to note that the students were less knowledgeable at the outset and they gained less than the other categories of participants. Needless to say, this finding is contrary to the position that most experts take which is that students are more knowledgeable about drugs than their teachers. The workshop did not have any impact on participant attitudes, but in terms of use, of drugs, we found that the student's had gradrupled their use. While this latter finding was statistically significant, it must be interpreted cautiously because there was no control group, and the student n was not equal to the other cells in the analysis of variance.

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One short-term program was somewhat unique in terms of its genesis (faculty and student planning) and as a function of drawing upon the expertise of an experience psychiatric team. One conclusion that can be drawn from these results, however, is that short-term programs, even though very sophisticated and intensive, may have little impact on the attitudes of students regarding the abuse of drugs. Furthermore, it is likely that almost any kind of discussion (structured or unstructured) regarding drugs will have some impact on the knowledge possessed by students. It is also interesting to note that the students perceived the program as having certain kinds of impact, but the more objective measures of change failed to validate their perceptions. For example, the sophomores and juniors rated the program high in terms of information gained, but their gain in knowledge was no greater than the gains by freshmen and seniors.

Plans for future drug education programs ought to weigh the cost of short-term (crisis-oriented) approaches in view of what appears to be minimal impact on students' attitudes and behavior. The primary value of this project was that it adds a note of caution to those who would set aside a single day for drug education and be satisfied with the results.

Temple University's concern for the drug abuse problem culminated in the Retreat, on the Hazards of Drug Abuse. Early in the planning stages of the Retreat, a decision was made to evaluate the program in depth, and federal support from the Justice Department made this possible. The evaluation design involved pre- and post-testing for information gains and attitude changes. Also included in the design was a follow-up six weeks after the conference that focused on the participants' activities that related to drug education. A control group was also established in order to determine the impact of the conference on the participants. The primary instrument that was utilized was

the DRUG ABUSE Scale. Before use, a thorough item analysis was conducted and a reliability of .83 was established.

In the area of knowledge gained, an analysis of variance which compared the participants to the controls on the pre- and post-testing revealed that the gain of twelve points for the participants was statistically significant at the .01 level. The participants' gain of twelve points was more than double their test scores and the control group only gained one-quarter of a point. When the knowledge scales for the undergraduates, graduates, and staff were subjected to an analysis of variance, no significant differences in pre- and post-gains were found.

The attitude data collected as part of the conference evaluation revealed that the participants and controls generally had conservative attitudes with regard to using drugs. Most of the statistically significant shifts were for the undergraduate students and these included:

1) A shift from agreeing with the legalization of marijuana to with legalization;

2) a shift from having no opinion about marijuana to disagreeing with its usefulness in achieving "greater insight;" and,

3) a shift from perceiving the drug abuser as not being alienated to seeing him as somewhat alienated.

Another important attitude that was discovered was that the University should not be involved in penalties for drug abusers beyond the penalties of the law. Although the participants did not see a punitive role, they strongly recommended that the University be involved in several approaches to drug education including: individual counseling; lectures in relevant courses; additional conferences; and resource centers.

The behavior follow-up of the participants and controls six weeks after the conference revealed that the participants were involved in more informal activities such as general reading and small group discussions than the controls.

There were no significant differences in terms of formal presentations in classrooms or before groups. The behavior follow-up also revealed that the great majority of the participants had read most of the material provided at the conference. Another significant finding at this time was that the participants in their contacts with drug abusers emphasized the hazards involved with drugs and also discussed personal problems with the abusers.

Also included in the evaluation were the participants' ratings of the conference. In general, they highly recommended the inclusion of former drug abusers; and, in fact, wanted more time with this type of speaker. Participants also responded favorably to the opportunity given to them during the small group discussion sessions. In that the participants were grouped according to pre-test scores, it was not surprising to find that they also felt the level of the conference was just about right. Finally, the participants were highly complimentary with regard to the organization and setting for the Retreat.

Based on the results of the evaluation, the following conclusions were developed:

1) The conference was particularly effective in increasing the participants' level of information regarding drugs;

2) the conference had a favorable impact on the attitudes of undergraduate students, particularly with regard to marijuana;

3) the conference stimulated the participants to further acquire and disseminate information related to drug education; and,

4) the format of the conference was very appropriate and further endeavors of this nature will rely heavily on this approach.

In an evaluation of a long-term program at the high school level the purpose of the study was to compare the relative effectiveness of four approaches to drug abuse prevention among secondary school youth. The four

approaches employed were:

1) A standard unit in health classes dealing with drug abuse;

2) group counseling using relationship techniques in addition to the health unit;

3) group counseling using model reinforcement techniques and a role model who has not abused drugs in addition to the health unit; and,

4) group counseling using model reinforcement techniques and a role model who is a reformed drug abuser in addition to the health unit.

Criteria for evaluative purposes included gain in knowledge, changes in attitudes, and reduction in drug abuse rates following the study. The primary objective of this project included:

1) Discovering the most effective means for increasing a secondary school student's knowledge regarding drug abuse;

2) discovering the most effective means for transmitting reasonable and cautious attitudes to secondary school students regarding drug abuse; and,

3) discovering the most effective means for reducing the incidence of drug abuse among secondary school students.

Subjects were randomly selected from the ninth and eleventh grades where all students are receiving instruction in drug abuse through a health unit. Students in both grades were stratified by levels of intelligence into three groups (above average, average, below average). Subjects were randomly assigned within each of the three levels of intelligence to the twelve groups at each level. Counselors were randomly assigned to the treatment groups with each counselor conducting one group of each type. Two college-age role models (one male, one female) were assigned to two groups of only one type at each grade level.

Treatment groups were scheduled to meet once each week for six weeks. Counselors were scheduled to avoid running two groups back-to-back and to

avoid running two groups of the same type on any particular day. Role models were also scheduled to avoid participation in two groups run back-to-back.

Prior to treatment, a pre-test was administered to ninth and eleventh grade students. A college level form employed in previous research (Swisher and Horman, 1970) to measure changes in level of knowledge and attitudes regarding drug use was revised to suit high school students. Following the group sessions and at a three month interval the same instrument was administered as two post-tests.

This study failed to identify any one approach as being more successful than any other approach with regard to knowledge gained, attitudes changed, or the use of drugs. In general the health unit provided a substantial information base as evidenced in all of the group scores. None of the approaches, however, had any impact on the attitudes of the students toward drugs nor were any of the approaches effective in reducing amount of drug use. Further analysis of the counselors' behavior indicated that they were not functioning consistently in terms of the group techniques. Those who did function as reinforcement counselors moved their groups toward healthier attitudes and reduced use of drugs, but with only two of the six counselors functioning appropriately these results did not lend themselves to adequate statistical analysis. It is also important to note that the involvement of drug experienced models did not show any particular effects.

In future programs of this nature the group leaders' behavior ought to be supervised and changes made in their functioning in order to more adequately examine the relative effectiveness of these alternatives.

The fifth study at the college level was almost identical to the high school counseling program in design, procedures and results. However, at the college level there was a shift in attitudes in a liberal direction

but fortunately there were no shifts in reported levels of use.

The major conclusion that relates to what Al was talking about is that these programs increased the knowledge level of the participants, but generally had no impact on their attitudes or their use of drugs. Our tentative conclusion is that information is not a harmful variable in drug education, but it is irrelevant. Counselors in particular must look very carefully at the impact of their behavior on clients in terms of potential reinforcement effects.

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Real Research in Drug Education; Drug Information: The Irrelevant Variable

By

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Drug Information: The Irrelevant Variable

There is an ever increasing awareness that usage of drugs is increasing, not only in the college setting but in the high schools and a few junior high schools as well. This drug usage is fast becoming a social phenomenon and is therefore causing great consternation on the part of parents, educators, administrators, and public officials. To date, the most popular response to the problem has been to establish some type of drug education program that will inform the youth of the inherent dangers associated with drug consumption hoping that information will motivate users and potential users to avoid contact with drugs.

In 1969, Richards[1] presented a paper to the American Psychological Association in which the enumerated seven basic approaches to drug education:

1. Scare Tactics
2. Two-sided Presentations
3. Students as Teachers
4. Curriculum Integration
5. Humor
6. Sensitivity Groups
7. Use of Authorities

The latter category, Use of Authorities, is probably the most popular. It usually entails a panel of experts such as law enforcement agents, medical authorities, psychologists, attorneys, and ex-addicts. Seymour Halleck refers to this "most prevalent but least effective theme" as having "much of the flavor of an old-fashioned revival meeting" in which the emphasis is to "scare the hell out of them."[2]

Of the seven, all but the sensitivity groups are based upon the idea that if we give people the information, they will use that information to decide for themselves to "not to use drugs." The following quotations will indicate some of the kinds of statements upon which many drug education programs are built.

A commercial publishing house, Guidance Associates, published a brochure describing a series of educational films dealing with drug abuse. Printed on the cover of that brochure is the question "How can you fight drug abuse most effectively?" and answers by stating, "By giving students the facts."[3] A non-profit corporation, Levi-Lamb made the following statement in one of its up-to-date, mod brochures designed for parents, "Given correct information, parents can and must be a powerful force in intelligently and effectively advising their children on the technical subject of drug abuse."[4] In an article in the Phi Delta Kappan entitled "Drug Abuse Education," several pharmacologists stated that, "Students respond to a balance presentation of the facts, without overtone of authority, and then make up their own minds."[5] Implicit in this statement is that the students will make up their minds in the way that we adults want them to make up their minds. A well known psychiatric authority on drug abuse, Ungerleider, described his involvement as, "We are there just to present the kind of information that is available so that they (the students) can figure out for themselves how they want to approach the problem of drugs."[6] In an article in the Journal of the American Medical Association, the Council on Mental Health recently wrote that "An informed citizenry in the final analysis, is the most effective deterrent of all."[7] The United States Department of Health Education and Welfare recently announced that it will spend approximately $3.5 million dollars for the intensive training of teachers and students. The purpose of such intensive training programs is described as:

> The trainees at all four centers will be equipped with a knowledge of the facts on drugs, an understanding of the drug subculture, and ability to communicate with diverse community groups with the aid of appropriate materials and techniques, and the ability to train others.

The obvious thrust of this massive nationwide effort is for the trainees to learn the facts and how to communicate them to others.

While the above is a description of an informational or factual approach, there are those authorities who question the success of that approach and therefore have been motivated to seek new, creative approaches to drug education. Finalator is one of those experts who seems to voice his discomfort by writing:

> First in the realm of education--we have a monster by the tail... We know deep down that the effects of health education on smoking and drinking has never been 100%, but we did not make much of a fuss about it. Now, we want desperately to get the drug message across to young people and we find that traditional methods do not work very well."[8]

Given the "informed citizenry" theory of drug education-prevention, and given today's proliferation of information germane to the broadly defined area of drugs, it seems, therefore, contradictory that we do not have the problem under control. Obviously, the problem may not be quite that simple and in fact may be very complex.

Our approach to the area of drugs has attempted to capitalize upon this complexity by examining the relationship between an individual's knowledge about drugs and his attitudes toward the use of drugs, as well as, between his knowledge about and actual use of drugs. To do this, a scale was developed by Swisher and Horman (1968)[9] that attempted to assess three basic areas germane to drug education. The three areas are discussed below and are accompanied by several sample items.

The first area to be measured is the affective. This portion of the scale measures the individual's attitude as recorded by 14 items to which he expresses his opinions related to drug abuse. Half of the items are worded

positively while the other seven are worded negatively. A single score is derived from the responses. Pre-test data yielded a split-half reliability coefficient of .84.

Sample Items:

1. Anyone caught using drugs should be penalized:

    a. strongly agree
    b. somewhat agree
    c. have no opinion
    d. somewhat disagree
    e. strongly disagree

2. Marijuana should be legalized:

    a. strongly agree
    b. somewhat agree
    c. have no opinion
    d. somewhat disagree
    e. strongly disagree

The second portion of the inventory is a 30 item knowledge scale that is referred to as the cognitive area. It measures knowledge about drugs in five areas including: narcotics, marijuana, LSD, amphetamines, and barbiturates. A single score based on correct answers was derived from this scale which based on all test data had a corrected split-half reliability of .82.

Sample Items:

1. Which of the following is not a name of marijuana:

    a. cannabis
    b. grass
    c. joint
    d. pan
    e. reefer

2. LSD can be detected by:

    a. its smell
    b. its taste
    c. its color
    d. its size
    e. none of the above

3. Amphetamines are:

   a. stimulants
   b. depressants
   c. addicting
   d. narcotics

4. Which of the following is not a tranquilizer:

   a. thorazine
   b. compazine
   c. methadrine
   d. stelazine

The third and last section of the inventory is the behavior scale which attempts to assess the individual's behavior as related to the six individual "drug" products.

Sample Items	Cigarettes	Alcohol (Beer & Mix)	Marijuana (Pot)	Halluci-nogens	Stimu-lants	Depres-sants
Have you ever used this product or drug? a. Have never used b. Have used						
How old were you when you first used this product or drug? a. 0-11 b. 12-15 c. 16-18 d. 19-21 e. 21 & older						
To what extent are you currently using this product or drug? a. not at all b. once or twice a month c. once a week d. twice a week e. three times a week f. four or more times a week						

The behavioral scale has the opportunity to garner such added and useful information as expressing motivations to use drugs, assessing friend's usage of drugs among others.

Each of the instruments described was administered to a number of populations, among them:

1. A private college preparatory academy (n=250)
2. A catholic high school (n=609)
3. A regional campus of major state university (n=134)
4. A public high school (n=402)
5. A major university (n=321)

While the above does not represent a random sampling of adolescents, the total n of 1716 drawn from these diverse sources does make the results worth considering.

Results

In correlating the respondents' level of knowledge about drugs with the nature of their attitudes toward drugs, we found that there is a consistent negative correlation, which was statistically significant for all five samples, between the level of knowledge and attitudes toward the use of drugs. In short, the more knowledge these students possessed about drugs, the more liberal (pro-drug use) were their attitudes.

TABLE 1

Correlation Between Knowledge About Drugs and
Attitudes Toward Drug Abuse
For Five Samples

Sample	n	r
Private Schools	250	-.40**
Catholic School	609	-.17**
Regional Campus	134	-.17*
Public School	402	-.34*
Major University	321	-.40*

* Correlation is significant at .05 level of significance.
** Correlation is significant at .01 level of significance.

The above statistics, while noting a negative correlation between knowledge about drugs and attitudes toward the use of drugs does not necessarily mean that if we were able to increase an individual's level of knowledge there would be a subsequent liberalization in his attitudes. Nor would a liberalization of attitudes necessarily imply greater use of drugs. While we are not implying cause and effect relationship, we are implying that there is a consistent relationship between liberal attitudes toward drugs and a higher than average knowledge about drugs.

Next, we examined the differences in levels of knowledge and attitudes between drug users and non-users. Marijuana users were compared with non-marijuana users because the use of the other drugs measured was not found to be extensive. The consistent mean differences between these groups further indicates that drug users are more knowledgeable than non-users and that knowledge about drugs is associated with use of drugs.

TABLE 2

Mean Attitude Differences Between
Marijuana Users and Non-Users
For Three Samples

Samples	Marijuana Users Means	Non-Users Means	Mean Differences	T Ratio
Private School	39.6	50.7	11.1	12.1*
Catholic School	38.0	51.7	13.7	10.6*
Regional Campus	39.5	51.0	12.5	8.0*

* Correlation is significant at .01 level of significance

Attitudinal differences between marijuana users and non-users are presented in Table 3. Again the marijuana users were consistently more liberal in their attitudes toward the use of drugs. This finding adds validity to the attitude scale and also provides further evidence for a link between knowledge about drugs, attitudes toward use of drugs and the actual use of the drugs.

TABLE 3

Mean Knowledge Differences Between
Marijuana Users and Non-Users
For Three Samples

Samples	Marijuana Users Means	Non-Users Means	Mean Differences	T Ratio
Private School	16.1	11.8	6.3	8.75*
Catholic School	12.7	9.6	3.1	4.7*
Regional Campus	16.9	13.6	3.3	4.2*

* Correlation is significant at $<.01$ level

To further emphasize the relationships already discussed, Pearson-product correlations were calculated between respondent's attitude toward drugs (affective score) and their reported use of all illegal drugs. The correlations

of -.47 and -.56 were the indicated correlations for the 402 public high school participants and the 321 university respondents respectively. Again, the negative correlation indicates that a low affective score (liberal attitude) is highly and significantly (.05 level of significance) related with drug usage.

TABLE 4

Pearson-product Correlations
Between Affective Scores and
Usage for Two Selected Samples

Samples	n	Correlation
Public High School	402	-.47**
Major University	321	-.56**

** Correlation is significant at .05 level.

In addition, correlations were used to illustrate the relationship between the respondent's knowledge (cognitive score) and his admitted drug use. Table 5 illustrates that essentially the same correlations were calculated for both samples. The correlations are both significant and indicative that more frequent use of drugs is associated with higher knowledge scores.

TABLE 5

Pearson-product Correlations Between
Cognitive Scores and Usage for Two
Selected Samples

Sample	n	Correlation
Public High School	402	≠.26**
Major University	321	≠.26**

** Correlations are significant at .05 level of significance.

Discussion

Summarily, it is hoped that this paper has exposed several important points that may lead you to question as did the authors of this research the current and popular trends in drug education. This questioning centered upon several key issues.

1. Drug education programs of the information type may not be as effective as we have hoped that they would be. Indeed, we may have discovered that information is the irrelevant variable.
2. Information, itself is often biased, misleading and certainly debatable. At the present, I am sure that I can locate as much information and research findings to support the thesis that LSD causes chromosome damage as I can find to refute the same thesis.
3. Factual information programs may actually desensitize youngster's fears of drugs which in turn could lead to greater curosity, experimentation and use. Today, youngsters are continually being confronted by television, radio, records, comics, and magazines concerned with or selling in some manner drugs or drug information. Kenneth Kennison aptly called this "stimulation bombardment."[10] Its most likely affect is to finally desensitize us to the information presented both through the media and in formal drug education programs.

Finally, the above opinions taken into consideration, we began to consider alternatives to drug education. This consideration led us to what we believed to be a viable alternative. The direction thus selected was to place less emphasis upon knowledge and more emphasis upon individual attitudes about the drugs and then the behavior that are motivated by those attitudes.

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